

REMARKS

Applicants have studied the Office Action dated April 9, 2003, and have made amendments to the specification, claims and abstract of the disclosure. Claims 8 and 10 have been canceled without prejudice, claims 1-7, 9 and 11-15 have been amended, and new claims 16-22 have been added. It is submitted that the application, as amended, is in condition for allowance. Reconsideration and reexamination are respectfully requested.

Applicants have amended the Abstract of the Disclosure to comport with proper language and length requirements. Marked-up and clean copies of the abstract are enclosed. It is believed that these amendments do not introduce new matter in the application. The substitute abstract includes the same changes as are indicated in the marked-up copies of the original abstract, showing additions and deletions.

The informality concerning the incorrect reference numeral "15" on page 3, line 14 has been corrected to reflect the proper reference numeral "19." It is submitted that this amendment does not introduce new matter in the application.

The title of the invention was objected to by the Examiner for lack of descriptiveness. Applicants believe that, in light of the amendments to the claims, the current title is clearly indicative of the invention to which the amended claims are directed. Therefore, it is respectfully requested that the objection to the title be withdrawn.

Claims 1 and 5 were objected to because of informalities regarding typographical errors. Claims 1 and 5 have been amended to reflect the changes requested by the Examiner. It is submitted that these amendments do not introduce new matter in the application and that the objection be withdrawn.

Claims 6, 9 and 14 were rejected under 35 U.S.C. § 112, second paragraph, due to lack of antecedent basis. Claim 6 has been amended to refer to "the illuminating member," as described in amended claim 1, thereby providing sufficient antecedent basis. With respect to claims 9 and 14, the term "the supporting means" has been amended to "a frame" to comport with the requirements of § 112, second paragraph. No new matter has been introduced by these amendments and it is respectfully requested that this rejection be withdrawn.

Claims 1-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over applicants' admitted prior art (AAPA) in view of U.S. Patent No. 6,445,373, issued to Yamamoto (hereinafter referred to as "the Yamamoto reference"), U.S. Patent No. 6,282,825,

issued to Godfrey, et al. (hereinafter referred to as “the Godfrey reference”) or U.S. Patent No. 6,352,322, issued to Nakao (hereinafter referred to as “the Nakao reference”). In the Office Action, the Examiner stated that “it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the display apparatus of the AAPA by not forming adhesion member at the corner parts of the panel so that performance is optimized and a proven technique is availed.”

The combination of AAPA with the Yamamoto, Godfrey or Nakao references neither describes nor suggests the inventions of amended claims 1 or 11. Amended claim 1 recites in part a liquid crystal display assembly wherein at least one adhesion member is installed between the optical and flexible illuminating members along at least one edge of the peripheries of those members but not at the corners. Claim 11, as amended, recites a mobile communication terminal utilizing the assembly recited in claim 1. By not having adhesion members located in the corners of the members, distortion and bleeding within the liquid crystal display is minimized when the display is subjected to physical impact, rapid temperature change, or wrenching.

It is well-settled that a reference must provide some motivation or reason for one skilled in the art (working without the benefit of the applicants’ specification) to make the necessary changes in the disclosed device. The mere fact that a reference may be modified in the direction of the claimed invention does not make the modification obvious unless the reference expressly or impliedly teaches or suggests the desirability of the modification. In re Gordon, 221 USPQ 1125, 1127 (Fed. Cir. 1984); Ex parte Clapp, 227 USPQ 972, 973 (Bd. App. 1985); Ex parte Chicago Rawhide Mfg. Co., 223 USPQ 351, 353 (Bd. App. 1984).

The Yamamoto, Godfrey and Nakao references, in combination with the AAPA, fail to meet the basic requirement for a finding of obviousness established by the courts in Gordon, Clapp, and Chicago Rawhide. There is no suggestion in the cited references of modifying the assembly of a liquid crystal display in the direction of the present invention, nor is there any suggestion whatsoever of the desirability of such modification (e.g., to prevent bleeding or distortion within the display that may occur as a result of physical impact to the display). Thus, it is respectfully submitted that the ordinarily skilled artisan would have had no motivation to provide the inventions recited in amended claims 1 and 11.

The Yamamoto and Godfrey references merely describe the use of adhesion members or double-sided adhesion members in the assembly of some display devices that may or may not

include LCD displays. Neither of the references discloses or teaches how an LCD panel is assembled, in particular. Therefore, the cited references are improper as they are directed to different assemblies than that of the claimed invention. Consequently, the references are irrelevant.

With respect to the Yamamoto reference, the Examiner pointed out in Figure 3 that reference numeral 33 refers to double sided adhesive tape, which “is adhered to the front face of the frame 25, and the liquid crystal panel 32 is adhered to the frame 25 with the double-sided adhesive tape 33.” Accordingly, it is understood that the adhesive tape in the Yamamoto reference, as described above and shown in Figure 3, is applied to a rigid surface (the frame 25) to adhere the liquid crystal display 32, another rigid member. This does not comply with the motivation of adhering at least one flexible member with adhesives since both structures are rigid.

Liquid crystal displays are conventionally comprised of one or more flexible panels such as a flexible printed circuit (FPC) or flexible light source. Amended claims 1 and 11 recite a liquid crystal display having a flexible illuminating member, such as a back light sheet, and at least one adhesion member installed between the edges of two members without substantially extending to the intersection of each member’s edges. The Yamamoto reference, alone or in combination with the prior art, fails to teach or describe the advantages of a less rigid assembly having a flexible member.

According to the Office Action, the adhesion members of the claimed invention correspond to magnetic elements 256 in Figure 7 of the Godfrey reference, which are “attached to the border areas 254” of the cover panel 250. The applicant respectfully disagrees. First, Figure 7 illustrates the vertical magnetic elements 256 extending to the corners of the border areas 254. The claimed invention, however, expressly excludes extension of adhesive tapes to the corners. Second, the Godfrey reference teaches the use of adhesives (magnetic elements) to adhere one rigid structure (the cover panel 250) to another rigid structure (metal frame 202). The claimed invention recites the adhesion of LCD assembly members, wherein at least one member is flexible. Finally, in using magnetic elements to affix one member to another as shown and described in the Godfrey reference, sliding movements and/or separation of the members may occur as a result of physical impact or internal torsion. Unlike the Godfrey reference, the use of adhesion members in the claimed invention prevents sliding or separation of the optical and

flexible illuminating members. Accordingly, the Godfrey reference does not teach or describe the advantages or motivation of not using adhesives in the corner of the frame as recited in amended claims 1 and 11.

Additionally, and contrary to the Examiner's statements, the Godfrey reference illustrates in Figure 7 the application of adhesion members such that, for example, an extension of the upper end of either left or right vertical magnetic element 256 would cause the extended upper end to overlap with an existing end of the upper horizontal magnetic element 256. This would not occur in the claimed invention because, according to amended claims 1 and 11, the adhesion members do not extend to the corners. Therefore, the Godfrey reference fails to teach "at least one adhesion member installed between the optical and illuminating members and extending along at least one edge of the peripheries of the optical and illuminating members, wherein the at least one adhesion member does not extend to intersections of edges of the periphery of each of the optical and illuminating," per amended claims 1 and 11 (emphasis added).

The Nakao reference teaches the use of adhesive tapes (reference numerals 98 and 99) as shown in Fig. 25 and (reference number 111) Fig. 30, but fails to teach or describe "at least one adhesion member installed between the optical and illuminating members and extending along at least one edge of the peripheries of the optical and illuminating, wherein the at least one adhesion member does not extend to intersections of edges of the periphery of each of the optical and illuminating members," per amended claims 1 and 11. In Fig. 25, the adhesive tapes referred to as 98 and 99 are shown to be applied to two separate surfaces, specifically the bed plates 95, 96 and a recessed portion of the case 94, respectively. Since, adhesive tapes 98 are applied to one surface and other adhesive tapes 99 are applied to another separate surface, no applicable corners between the two noncontiguous surfaces exist.

Furthermore, the adhesives used in the Nakao reference are applied to two rigid surfaces (the windshield 54 and upper case 51), as described above with respect to the Yamamoto reference. Unlike the claimed invention, which recites a flexible illuminating member, the application of adhesives in the Nakao reference is between rigid members and therefore does not minimize bleeding in or distortion of the liquid display panel that may result from physical impact. Therefore, amended claims 1 and 11 of the present invention are patently distinct from the Nakao reference.

Notwithstanding the aforementioned arguments, the Yamamoto, Godfrey and Nakao references fail to teach or describe the lack of adhesives in corners of a periphery of a flexible member. Furthermore, neither of these references, alone or in combination with AAPA, teaches or describes the limited use of adhesion members as recited in amended claims 1 and 11.

Therefore, it is respectfully submitted that the amended claims 1 and 11 distinguish over AAPA in view of the Yamamoto, Godfrey or Nakao references. Furthermore, claims 2-7 and 9, which depend from amended claim 1, and claims 12-15, which depend from amended claim 11, should be deemed allowable for the reasons cited above.


New claim 16 recites a polarizing plate fastened to the top surface of the upper member of the liquid crystal display panel. Support for claim 16, as well as amended claim 7, can be found in the specification on page 9, lines 9-11. Furthermore, new claims 17 and 18 further describe the first and second members in the assembly of the liquid crystal display. Support for claims 17 and 18, as well as amended claim 6, can be found in the specification on page 8, lines 12-25. New claims 19-22 recite embodiments of the invention and include at least all the limitations of claims 1 or 11 and are therefore allowable for the same reasons discussed with respect to claims 1 and 11. No new matter is introduced by the amendments to claims 6 and 7 or by the addition of claims 16-22.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein; and no amendment made was for the purpose of narrowing the scope of any claim, unless Applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California, telephone number (213) 623-2221 to discuss the steps necessary for placing the application in condition for allowance.

Respectfully submitted,
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Date: July 9, 2003

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